

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A magnesium-containing, hydrogen-storing material that contains an organometallic compound of the metals Zr or V which displays a nanocrystalline structure, as a catalyst for hydrating or dehydrating the same.
2. (Canceled)
3. (Previously presented) A magnesium-containing material according to claim 1 wherein the material displays a nanocrystalline structure.
4. (Canceled)
5. (Previously presented) A magnesium-containing material according to claim 1, wherein the organometallic compound content lies in the region between 0.005 mol% and 50 mol%.
6. (Previously presented) A magnesium-containing material according to claim 5, wherein the organometallic compound content lies in the region between 0.005 mol% and 20 mol%.
7. (Previously presented) A method for the manufacture of a magnesium-containing material according to claim 1, wherein the magnesium-containing material containing the organometallic compound is subjected to a mechanical grinding process.
8. (Previously presented) A method according to claim 7, wherein the duration of the grinding process is 1 minute to 200 hours.
9. (Previously presented) A method according to claim 8, wherein the duration of the grinding process lies in the region from 20 hours to 100 hours.
10. (Previously presented) A method according to claim 7 wherein the grinding process is performed in an inert gas atmosphere.
11. (Previously presented) A method according to claim 10, wherein the inert gas is argon.

12. (Previously presented) A method according to claim 7 wherein the grinding process is performed with the addition of an organic solvent.
13. (Previously presented) A magnesium-containing material according to claim 2, wherein the material displays a nanocrystalline structure.
14. (Previously presented) A magnesium-containing material according to claim 2, wherein the organometallic compound content lies in the region between 0.005 mol% and 50 mol%.
15. (Previously presented) A magnesium-containing material according to claim 4, wherein the organometallic compound content lies in the region between 0.005 mol% and 50 mol%.
16. (Previously presented) A method according to claim 9, wherein the grinding process is performed in an inert gas atmosphere.
17. (Previously presented) A method according to claim 8, wherein the grinding process is performed with the addition of an organic solvent.
18. (Previously presented) A method according to claim 9, wherein the grinding process is performed with the addition of an organic solvent.
19. (Previously presented) A method according to claim 10, wherein the grinding process is performed with the addition of an organic solvent.
20. (Previously presented) A method according to claim 11, wherein the grinding process is performed with the addition of an organic solvent.